



C3 PROZESS- UND
ANALYSENTECHNIK GmbH

RODUKTINFORMATION

P

THINKY Mixer ARV-310 / ARV-310LED / ARV-310P

THINKY

Our amazing mixer with
a rotating and revolving method
accelerates a mixture, empty materials with
the same speed and force. It is a revolutionary mixer that has
been used in many industries.
Temperature: 0°C to 100°C
Capacity: 100g to 1000g

High-speed material
rotation under strong
acceleration 400G.

High-speed rotation
High-speed rotation
High-speed rotation
High-speed rotation



Mix, Disperse and Degas Completely in Seconds

Planetary Centrifugal Mixer

THINKY "Vacuum" Mixer

ARV-310

Squeeze and vacuum all air bubbles out from the mixture
This is the power of vacuum centrifugal mixer

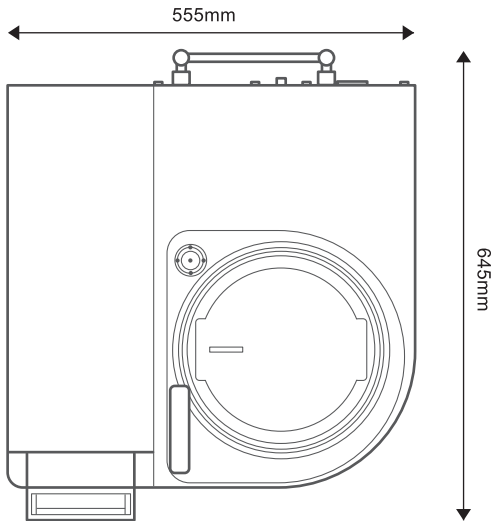
- Disperse and de-agglomerate all types of materials.
- Deaerate down to sub-microns extremely rapidly due to centrifugal mixing process in vacuum pressure, regardless viscosity of materials.
- NO overflows, NO monitor of the system. 400Gs force applied to materials has ended overflow materials in degassing process.
- Select your preferred unit of measurement. KPa or Torr
- Easy operation. Load material container and press the start button. Process can be controlled as programmed.
- Precise control on materials. Program different 5 sequential mixing steps in a cycle.
- Recall the programmed cycle. 9 memory slots are available.

For
the Best
Result



Planetary Centrifugal Vacuum Mixer

THINKY Mixer ARV-310



Typical Vacuum Process



Vacuum deaeration is a time consuming work, which requires your dedicate monitor on materials for overflow control, through long time processing.

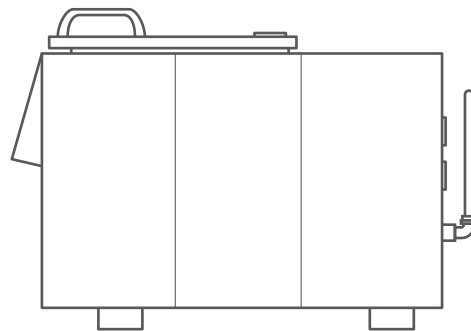
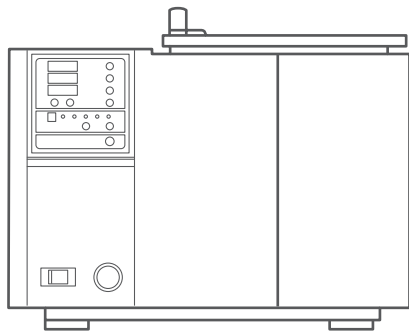
ARV-310



ARV-310 causes NO material overflow in the process. Process itself will be done in minutes.



The lid slides and has a wide open working area.



Standard Accessories ;

- (1) 300ml reusable container x 3 pieces
- (2) 150ml reusable container x 1 piece
- (3) 150ml container adapter x 1 piece

ARV-310 Main Specifications

Model Number	ARV-310	Vacuum Chamber	Rotator in Vacuum	Unit Dimensions	H440×W555×D645 (mm)
Product Name	"Planetary Centrifugal Mixer THINKY Vacuum Mixer"	Vacuum pump capacity	200 Pa (2Torr), 100 liter / minute	Unit Weight	90kg. (198lb.)
Method	Non-contact, planetary motion centrifugal mixing method	Vacuum Pressure	0.67 Kpa (5Torr) - Air pressure	Safety Features	Lid Locking system, Vibration Sensor, Rotation speed sensor
Process Cycle Time	1 seconds to 30 minutes	Revolution Speed	0, 200 - 2,000RPM 10RPM Increment	Standard Containers	300ml or 150ml jar, HDPE
Program Memory	9 slots	Rotation Speed	0 - 1000RPM Follows Revolution Speed / 2		
Maximum mixing capacity (gross weight)	Air 250ml, 310g (300ml jar) 150ml, 310g (150ml jar) Vacuum* 200ml, 310g (300ml jar) 120ml, 310g (150ml jar)	Power Supply	Single Phase 100VAC ±10% 50hz/60hz Power consumption Standby : 50VA // In process : 1,100VA		
Multi-Step Mixing	1-5 steps in a cycle	Operating Environment	10-35°C, 35-85%RH (Non-condensation)		

Optional Adapters



Please ask THINKY sales representatives for all adapters available in your country or custom made adapters for your specific containers.

* Process half of ML capacity of your mixing cup with no use of its lid. Lid is with hole in the middle.

- Specification is subject to change without notification.

- The unit is NOT explosion-proof.

- The mixing results may vary depending on processing conditions or materials.

- Material could heat by shear given in the process.

Pioneer of Centrifugal Mixer

THINKY Corporation

Americas/EU: Georgia, U.S.A

www.thinky-usa.com

Tel: +1-770-919-2850 info@thinky-usa.com

All countries: Tokyo, Japan

www.thinky.co.jp/english or www.thinky.cn

Tel: +81-3-5821-7455 mixer@thinky.co.jp

Headquarters: 3-7-16, Iwamoto-cho Chiyoda-ku, Tokyo, Japan, 101-0032 Fax: +81-3-3865-7833



THINKY Business Partner ;

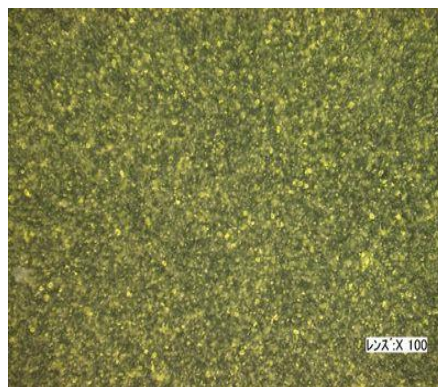
◀ New Product info ▶

THINKY Corporation
International Marketing Department
Tokyo 81+3-5821-7455

NEW !!



ARV-310LED CE



Optic Microscope (x100)

- ★Uniform mixing and dispersing
- ★No air bubbles are observed

— Specification —

Product name	"THINKY mixer" Rotation/Revolution propeller-less mixing in vacuum
Model	ARV-310 LED CE
Max process volume	Air 250mL / *Vacuum 200mL (*Use inner and outer lid with an air vented hole)
Max process weight	310g (Gross)
Standard container	300mL and 150mL containers (HDPE)
Operating time setting range	0 seconds to 30 minutes (in the unit of 1 sec.)
Maximum revolution speed	1,200 rpm
Ultimate Vacuum	0.67kPa
Vacuum pump ability	266 Pa (Approx. 2 Torr) 100L/min.
Vacuumping style	Rotating part vacuum chamber
Programing memory	9 slots (each 5 steps in 1 slot)
Safety features	Lid locking, Vibration sensor, Revolution speed sensor, Pressure sensor, Emergency bu
Power supply	Single phase 230V 50/60Hz
Operating environment	10~35°C、 35~85%RH(Non-condensation)
Unit dimensions	450 H x 555 W x 645 D(mm)
Unit Weight	Approx. 90 kg
Options	Please consult with our sales representative.



C3 PROZESS- UND
ANALYSETECHNIK GmbH
Peter-Henlein-Str. 20
D-85540 Haar b. München
Telefon 089/45 60 06 70
Telefax 089/45 60 06 80
info@c3-analysentechnik.de
www.c3-analysentechnik.de

Meeting traceability needs in operating processes

THINKY Mixer Vacuum type **ARV-310P**

Touch panel

Recipe Management Improved

- ✓ Register up to 20 recipes, each specified by an appropriate name.
- ✓ Real-time display and check of recipe progress and operating status
- ✓ Easy identification of causes of error by clear display of error status with a corresponding explanation



Communication function

Support automatic operation and log report

- ✓ An external terminal for recipe selection and loading as well as operation start and stop available
- ✓ During remote control, external terminal instructions are prioritized and main unit panel operation is disabled.
- ✓ Supports equipment function of reporting progress and operating status every second
- ✓ Sample software for remote operation available free of charge (for Windows 7, 8, and 10)

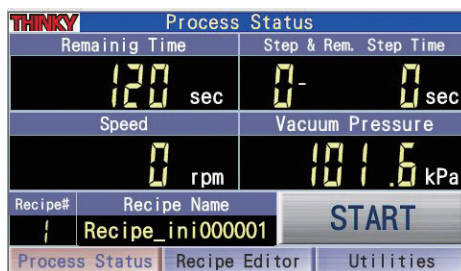
Operation screen of touch panel

① Initial screen



Japanese ⇄ English language switch possible

② Screen of operation control



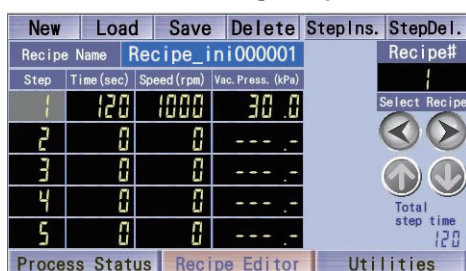
Displays real-time revolution speed and vacuum pressure

③ Screen of utility selection



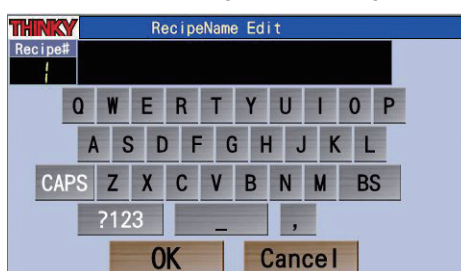
Shows total number of operations and total operation time in a table

④ Screen for editing recipe



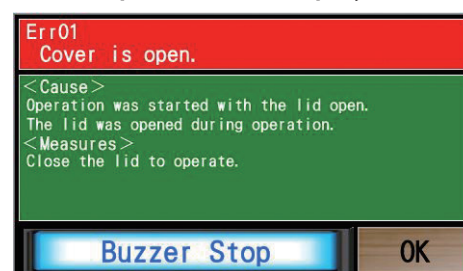
Viewing and editing of all steps in one screen possible

⑤ Screen for recipe-name input



Upper and lower case letters and numerals can be input.

⑥ Example of alarm display



Error details, explanation of cause, and recommended action are displayed together with the error number.

ARV-310P : Product Specification

Method	Vacuum type, propellerless, rotation and revolution mixing method	
Range of operation time	From 00 minutes 00 seconds to 30 minutes 00 seconds (The total operation time can be set at maximum 30 minutes in units of 1 second)	
Revolution speed	Maximum 2000 rpm (0 rpm and range from 200 to 2000 rpm in units of 10 rpm)	
Rotation speed	Maximum 1000 rpm (automatically set to be the half of the revolution speed)	
Number of memories	20 memories (five steps can be registered in each)	
Container	300 ml and 150 ml, made of HDPE	
Maximum & minimum quantity processed	Atmospheric pressure	When using 300 ml container: 250 ml / 310 g When using 150 ml container: 120 ml / 310 g
	Vacuum operation	When using 300 ml container: 200 ml / 310 g When using 150 ml container: 100 ml / 310 g

Vacuum chamber	Rotary part vacuum chamber system	
Power supply	Voltage	Single-phase AC 100 V ± 10%, 50 kHz / 60 kHz
	Power consumption	During standby: about 50 VA During operation: Maximum 1200 VA (except at startup)
Operation environment	- 10 to 35°C, 35 to 85% RH (no condensation) - Altitude lower than 2000 m	
Main body dimensions	450 mm (H) × 555 mm (W) × 645 mm (D)	
Body weight	About 90 kg	
Switch / display unit	Touch panel (4.3 inches)	
Communication function (RS232C)	Data collection function (Traceability function) Operation start and stop, recipe editing and saving, using an external terminal	
Others	Real-time display of rpm during operation, function of setting recipe name	

THINKY CORPORATION

Headquarters: 2-16-2 Sotokanda, Chiyoda-ku, Tokyo 101-0021
Phone : +81-3-5207-2713 Fax : +81-3-5289-3281

THINKY USA Inc. : 23151 Verdugo Drive, Suite 112 Laguna Hills, CA92653, USA

THINKY CHINA: East building, HaiAn Kafunuo Mansion, Shennan road,
Qianhai road, Nanshan district, Shenzhen

<https://www.thinkymixer.com/en-gl/>

Sales agent



C3 PROZESS- UND
ANALYSENTECHNIK GmbH
Peter-Henlein-Str. 20
D-85540 Haar b. München
Telefon 089/45 60 06 70
Telefax 089/45 60 06 80
info@c3-analysentechnik.de
www.c3-analysentechnik.de

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C3 PROZESS- UND
ANALYSENTECHNIK GmbH

**C3 Prozess- und
Analystechnik GmbH**
Peter-Henlein-Straße 20
D-85540 Haar b. München
Telefon (089) 45 60 06 70
Telefax (089) 45 60 06 80
info@c3-analysentechnik.de